

Clear Climate Code

clearclimatecode.org

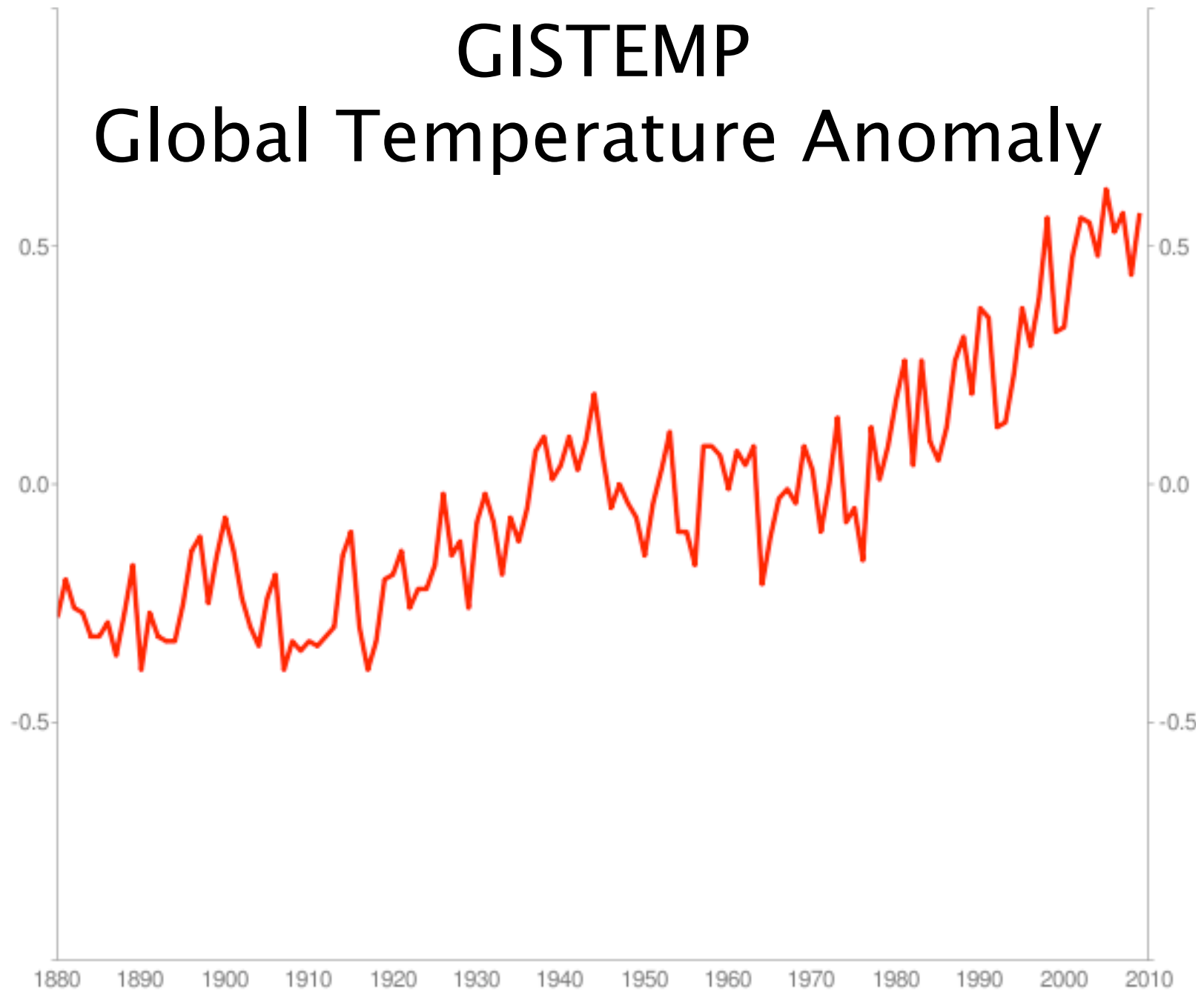
Nick Barnes
David Jones

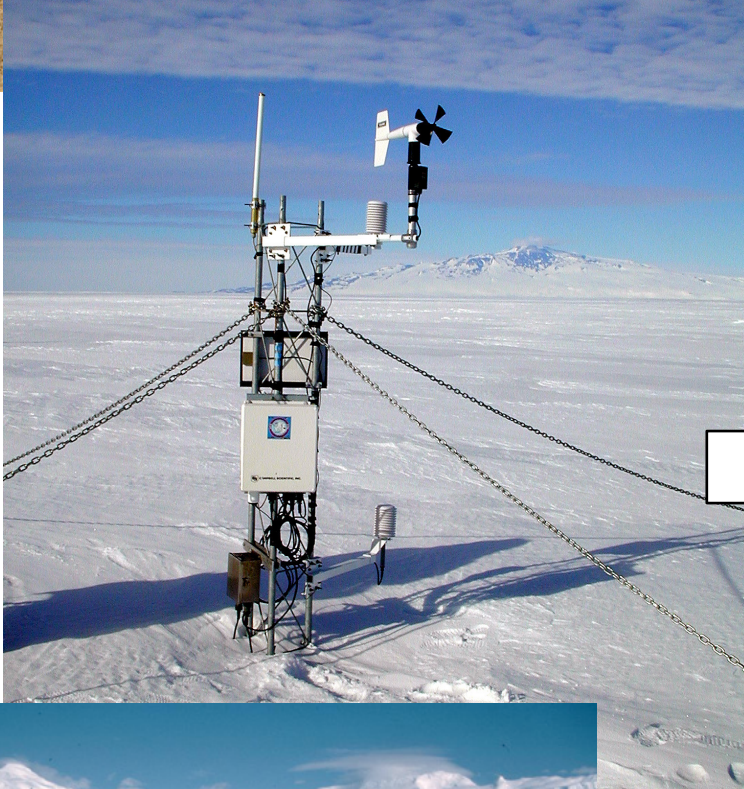
Ravenbrook Limited

... and other contributors.

GISTEMP

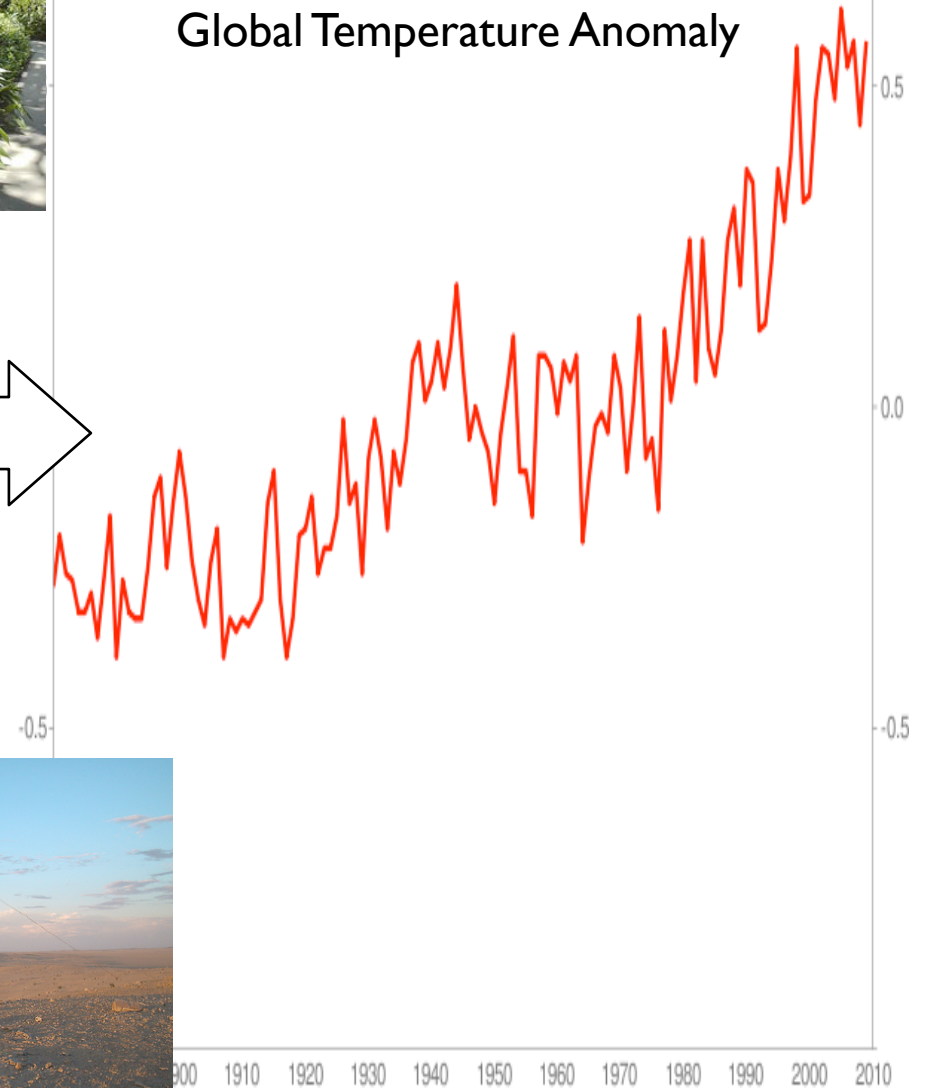
Global Temperature Anomaly





GISTEMP

Global Temperature Anomaly



FORTRAN 77

```
DO 20 JC=1,JCM
  LT100S(JC)=NINT(100./PI180*ASIN(SNS+(JC-1)*DSLATJ))
  LT100N(JC)=NINT(100./PI180*ASIN(SNS+JC*DSLATJ))
  SNLATJ(JC)=SNS+(JC-.5)*DSLATJ
20 CSLATJ(JC)=SQRT(1.-SNLATJ(JC)**2)
  DO 50 I=1,NUMJ(J)
    NR=NR+1
C**** Complete definition of SKIP-array
    DO 30 IN=INFRST(J),INLAST(J)
      30 SKIP(IN,NR)=.FALSE.
      DLON=360./NUMJ(J)
      XEAST=-180.+I*DLON
      XWEST=XEAST-DLON
C**** Extend each box by half a box in each direction (>Rcrit km ?)
      XW(NR)=XWEST-.5*DLON
      IF(J.EQ.1.OR.J.EQ.8) XW(NR)=-180.
      XE(NR)=XEAST+.5*DLON
      IF(J.EQ.1.OR.J.EQ.8) XE(NR)=180.
      XN(NR)=ASIN(SNN)/PI180+DDLAT
      XS(NR)=ASIN(SNS)/PI180-DDLAT
```

From the Internet

After a few weeks of effort no one was able to get the code to compile and execute.

Nobody has the patience to slog through the crap.

I no longer acknowledge GISTEMP as a legitimate source of temperature data

It is quite evident that NOAA, GISS, GISTEMP and GHCN are skewing their datasets toward the higher temperatures

One has to wonder though, just how much of that has to do with temperature measurements being taken in proximity to a growing human population at these locations?

One would have a hard time discriminating between the novel bugs that did not affect the published results from the prior bugs that did.

nobody (that I know of) has been able to get the FORTRAN code released by GISS last year to run.

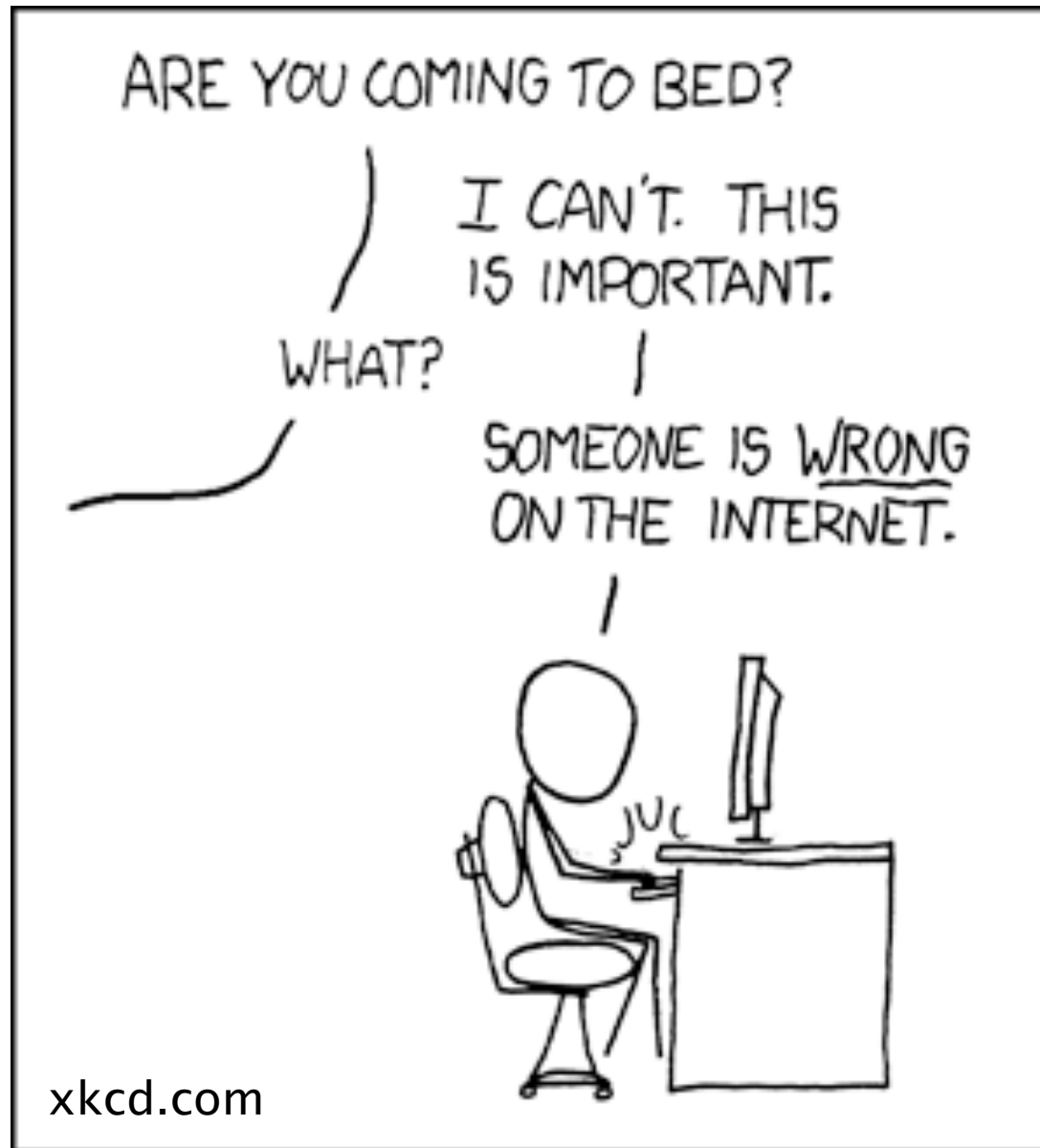
Following that, an analysis of the methodology and replication of the computer program output to see if it matches the current data sets

Grilling the Data

everybody knows adjustments are stupid

Gisstemp was like divinci code written by the shortbus crew

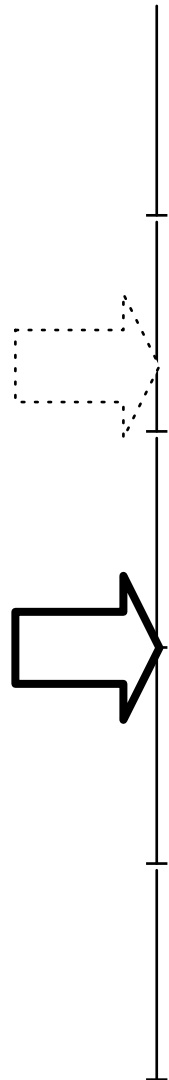
Motivation



Clear Climate Code Goals

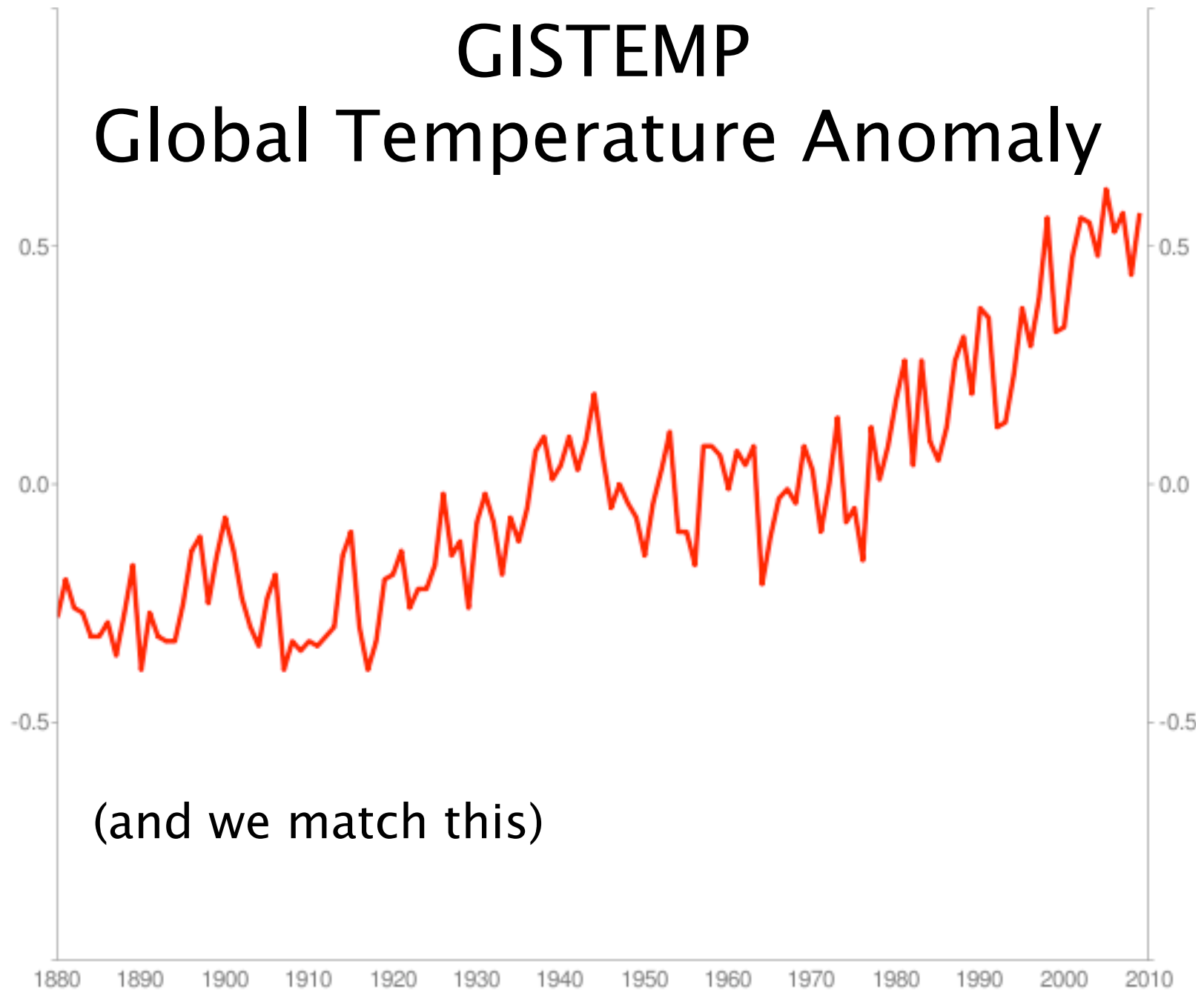
- 1.To produce clear climate science software;
- 2.To encourage the production of clear climate science software;
- 3.To increase public confidence in climate science results.

Plan for GISTEMP



0. Run GISTEMP as it stands, step by step. Retain all intermediate data files.
1. Reimplement each step in Python, with the same inputs and outputs, using GISTEMP intermediate data files as test data.
2. Combine the Python steps into a single program, simplifying by eliminating the need for intermediate data files.
3. Consider the correctness of the underlying algorithm.
4. Webify, data visualisation, ...

GISTEMP Global Temperature Anomaly



(and we match this)

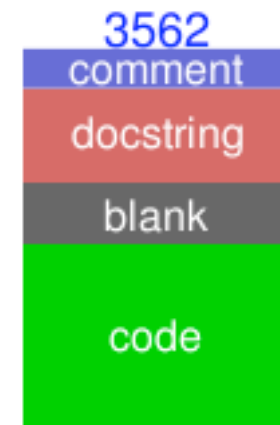
Code Metrics



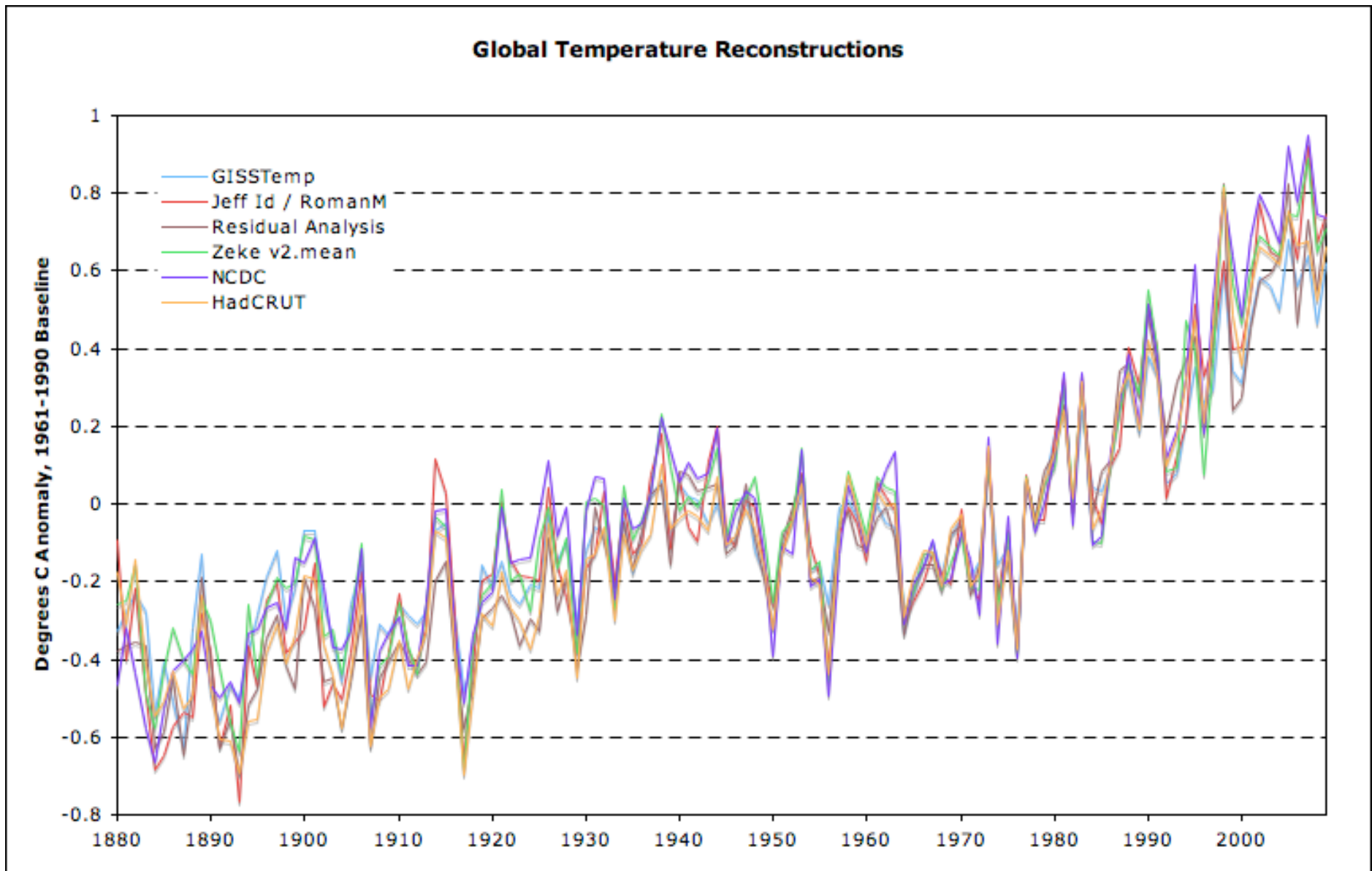
GISS



ccc-gistemp



Independent Analyses



Graphic courtesy Zeke Hausfather

Ravenbrook

NASA's response

"I hope to switch to your version of that program ... Ideally, we would like to replace our whole code."

—Reto Ruedy, 2010-01-27

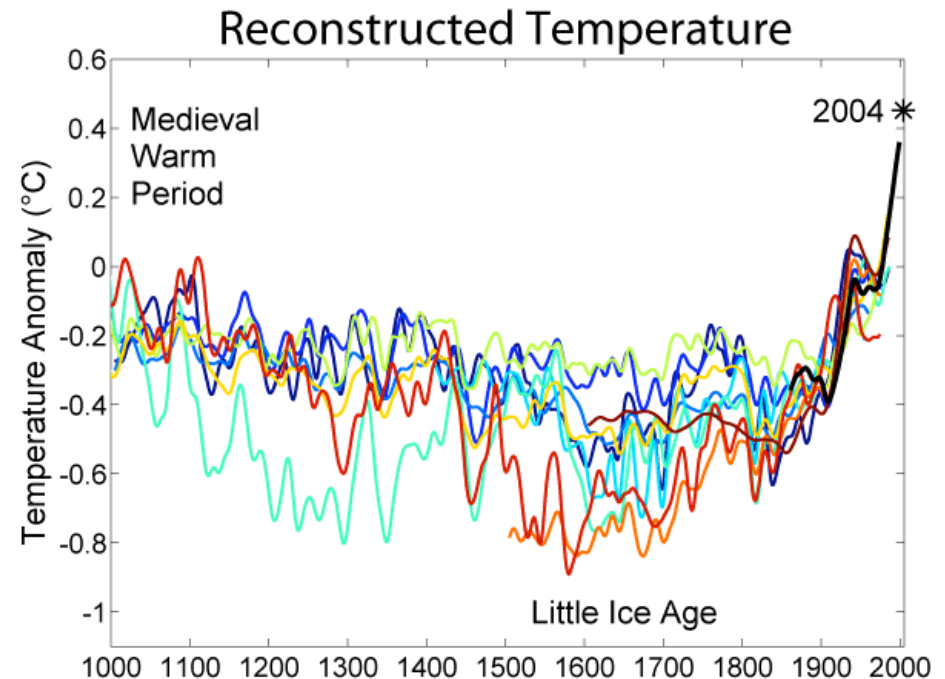
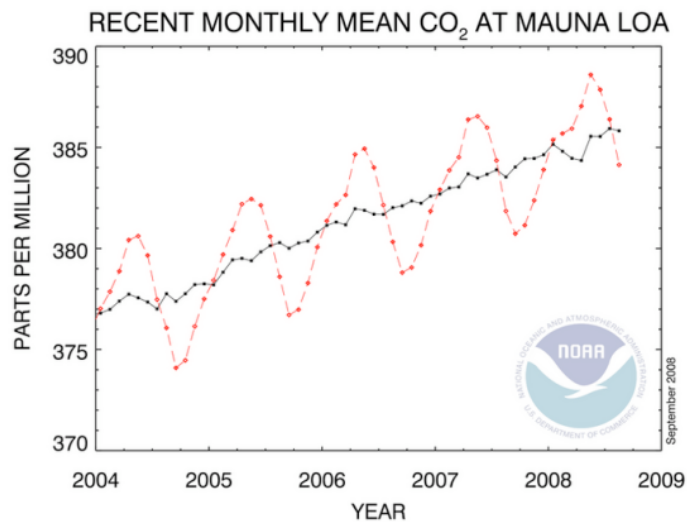
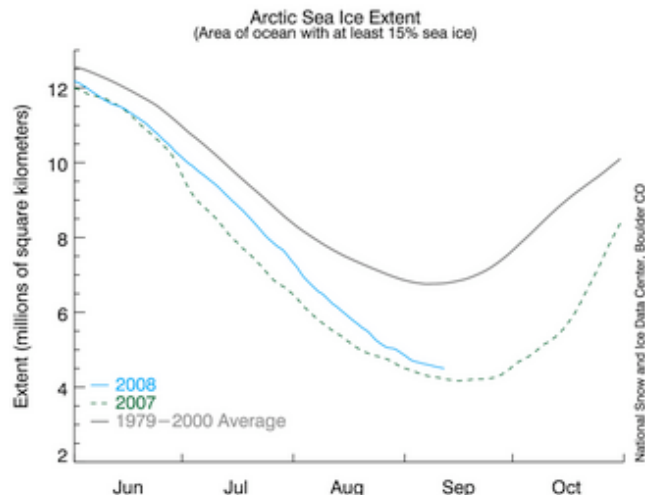
SciTech Committee

54. It is not standard practice in climate science and many other fields to publish the raw data and the computer code in academic papers. We think that this is problematic because climate science is a matter of global importance and of public interest, and therefore the quality and transparency of the science should be irreproachable.

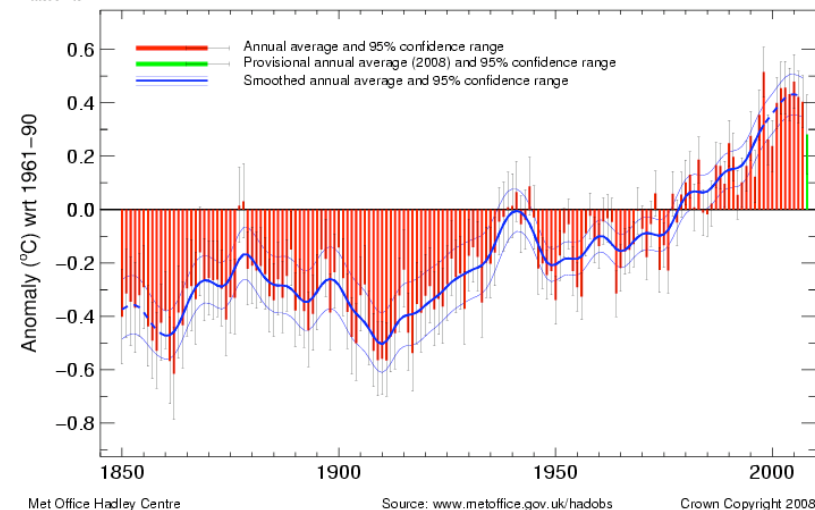
Oxburgh

... other countries have followed suit impeding the flow of processed and raw data to and between researchers. This is unfortunate and seems inconsistent with policies of open access to data promoted elsewhere in government.

Future Clear Climate Code Projects



Global average temperature 1850–2007
Based on Brohan et al. 2006



Your Climate Science Code?

ClearClimateCode.org
join us!

ravenbrook.com
(and others)
hire us!